

WHAT IS CLAIMED IS:

1. An aluminum alloy plate which is used for producing a molded article to be subjected to a bake coating, comprising silicon (Si), magnesium (Mg), aluminum (Al) and inevitable impurities,

wherein when the Si content by weight percent is taken on an x-axis of rectangular coordinates and the Mg content by weight percent is taken on a y-axis of the rectangular coordinates, the Si and Mg contents are set in a region in a diagram formed by sequentially connecting a point A (0.18, 0.31), a point B (1.3, 0.31), a point C (1.3, 0.64), a point D (0.37, 0.64), a point E (0.37, 1.0), a point F (0.18, 1.0) and the point A (0.18, 0.31).

2. An aluminum alloy plate which is used for producing a molded article to be subjected to a bake coating, comprising silicon (Si) and magnesium (Mg) as requisite chemical constituents and further contains at least one of Fe, Ti, B and Cr as an optional chemical constituent, with the balance being aluminum (Al) containing inevitable impurities,

wherein when the Si content by weight percent is taken on an x-axis of rectangular coordinates and the Mg content by weight percent is taken on a y-axis of the rectangular coordinates, the Si and Mg contents are set in a region in a diagram formed by sequentially connecting a point A (0.18, 0.31), a point B (1.3, 0.31), a point C (1.3, 0.64), a point D (0.37, 0.64), a point E (0.37, 1.0), a point F (0.18, 1.0) and the point A (0.18, 0.31); and the Fe content is set in a range of 0.2 % by weight $\leq \text{Fe} \leq 0.6$ % by weight; the Ti content is set in a range of 0.01 % by weight $\leq \text{Ti} \leq 0.2$ % by weight; the B content is set in a range of 0.0005 % by weight $\leq \text{B} \leq 0.05$ %

by weight; and the Cr content is set in a range of 0.03 % by weight \leq Cr \leq 0.2 % by weight.

3. An aluminum alloy plate which is used for producing a molded article to be subjected to a bake coating, comprising silicon (Si), magnesium (Mg) and copper (Cu) as requisite chemical constituents and further contains at least one of Fe, Ti, B and Cr as an optional chemical constituent, with the balance being aluminum (Al) containing inevitable impurities,

wherein when the Si content by weight percent is taken on an x-axis of rectangular coordinates and the Mg content by weight percent is taken on a y-axis of the rectangular coordinates, the Si and Mg contents are set in a region in a diagram formed by sequentially connecting a point A (0.18, 0.31), a point B (1.3, 0.31), a point C (1.3, 0.64), a point D (0.37, 0.64), a point E (0.37, 1.0), a point F (0.18, 1.0) and the point A (0.18, 0.31); and the Cu content is set at Cu \leq 0.2 % by weight; the Fe content is set in a range of 0.2 % by weight \leq Fe \leq 0.6 % by weight; the Ti content is set in a range of 0.01 % by weight \leq Ti \leq 0.2 % by weight; the B content is set in a range of 0.0005 % by weight \leq B \leq 0.05 % by weight; and the Cr content is set in a range of 0.03 % by weight \leq Cr \leq 0.2 % by weight.

4. A method of making the aluminum alloy plate of claim 1, comprising:
preparing a molten metal having the composition of claim 1 to produce a plate material then subjecting the plate material to cold rolling to provide a cold rolled plate;

then thermally treating the cold rolled plate by sequentially subjecting the cold rolled plate to a solution treatment and a stabilizing thermal treatment; and then optionally subjecting the plate to a straitening treatment.

5. A method of making the aluminum alloy plate of claim 2, comprising:

preparing a molten metal having the composition of claim 1 to produce a plate material then subjecting the plate material to cold rolling to provide a cold rolled plate;

then thermally treating the cold rolled plate by sequentially subjecting the cold rolled plate to a solution treatment and a stabilizing thermal treatment; and then optionally subjecting the plate to a straitening treatment.

6. A method of making the aluminum alloy plate of claim 3, comprising:

preparing a molten metal having the composition of claim 1 to produce a plate material then subjecting the plate material to cold rolling to provide a cold rolled plate;

then thermally treating the cold rolled plate by sequentially subjecting the cold rolled plate to a solution treatment and a stabilizing thermal treatment; and then optionally subjecting the plate to a straitening treatment.